



भारतीय पैकेजिंग संस्थान  
Indian Institute of Packaging  
An autonomous body under the Ministry of Commerce & Industry, Govt. of India

# **ADMISSIONS OPEN**

## **M.S, M.Sc, PGDP & CPE**



# **PROSPECTUS**

## **2023**

**M.S. in Packaging Technology at Hyderabad**

**M.Sc. in Packaging Technology at Delhi**

**Post Graduate Diploma in Packaging at Mumbai, Kolkata & Ahmedabad**

**Certified Packaging Engineer at Chennai**







# *Vision*

*To make Indian Institute of Packaging a World  
Class Centre of Excellence with Sustained  
Commitment from the Stake Holders.*

*To develop Close International Relationship with  
Worldwide Packaging Fraternity.*

*To make India a Focal Point for Contemporary  
Developments in Art, Science, Technology and  
Engineering in the Field of Packaging.*



## *Quality Policy*

*The Quality Policy of Indian Institute of Packaging  
is to provide assured tests and measurements at  
all times conforming to the specifications laid  
down in National, International or customer  
specified standards.*

*We believe in and strive for the involvement of  
every member of the Institute in evolving and  
implementing an effective and efficient Quality  
Assurance Programme as laid down in ISO/IEC  
17025:1999.*

*We shall endeavour meticulous implementation  
and compliance with the Quality Manual and  
build an attitude essential for a prevention  
oriented work culture.*



**Mr. R. K Mishra, IRS**  
Additional Director (DGFT)  
& Director - IIP

Indian Institute of Packaging (IIP) is an autonomous body in the field of packaging and working under the administrative control of the Ministry of Commerce and Industry, Government of India. The Institute was established on 14th May, 1966 with its headquarter and principal laboratories in Mumbai. The Institute set up its first branch office at Chennai in 1971, followed by branches at Kolkata, Delhi, Hyderabad, Ahmedabad in 1976, 1986, 2006 and 2017 respectively. In addition, three more centres are to be made operational at Bangalore, Guwahati and Kakinada.

The main objective of the Institute is to promote the export market by way of innovative package design and development as well as to upgrade the overall standards of packaging in the country. The Institute is involved in various activities like testing and evaluation of packaging materials and packages, consultancy services and research & development related to packaging. Besides this, the Institute is involved in training and education in the field of packaging.

The Indian packaging industry has not only grown in size and volume, but also in its level of operation. In addition, globalisation has also forced the Indian packaging industry to become more competitive in the global markets and also to win major contracts abroad. Today, the Indian packaging industry is growing at an annual rate of 15% as against 5-6% growth of the global packaging industry. This has also created a great demand for packaging professionals by the Indian packaging industry. In fact, packaging training and education have become the 'Need of the Hour' in our country so as to upgrade the overall standards of packaging at the National level.

Since 1966 IIP is being conducting various training and education program for industry & individuals. I am confident that all those who joins IIP training and education programmes will succeed in their future. My best wishes to all the new aspirants who would be joining the illustrious IIP family.

**Mr. R. K MISHRA, IRS**



It was in 1985, the institute decided to take a step forward in the direction of Packaging Education. We are second in the world, besides USA, to start two years Post Graduate Diploma in Packaging. With the inputs from expert educationists under the chairmanship of Dr. D. V. Rege, the then Director of University Department of Chemical Technology, Mumbai (now ICT) with Dr. V. Gupchup, the then Principal of Victoria Jubilee Technical Institute, Mumbai (now Veermata Jijabai Technological Institute), Dr. Ravi Talwar; Mr. A. S. Athale; Dr. K. N. Kaul, Technical Director of M/s. Roche Products; Dr. R. Jayaraman, Vice-President of M/s. Britannia Industries Ltd. and others, the curriculum of two years full time Post Graduate Diploma in Packaging was developed.

Since packaging is an inter-disciplinary subject, the first semester includes exposure to subjects like Mathematics, Physics, Chemistry, Mechanical and Electrical Engineering. Packaging technology is then introduced with detail elaborate coverage on various packaging media, which includes paper and paperboard, glass, metals, plastics and composites. Similarly, laboratory practical training and visit to packaging converters and user industries are included in the curriculum to expose students to the practical aspects of the subject.

In any organisation, since the packaging professional plays a vital role, management subjects such as Production Planning and Control. Total Quality Management, Industrial Engineering, Materials Management, Marketing and Financial Management are also included.

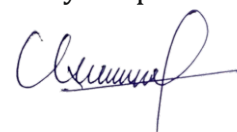
The post graduate diploma course commenced in 1985 and the curriculum is regularly reviewed with addition of new subjects. Some of the subjects recently included are Packaging laws and regulation, Computer Aided Design, Mould Design, Communication Skills, etc., which now form a part of the syllabus. The institute has a separate computer laboratory for Post Graduate Diploma students equipped with necessary software for their training and use. Experienced and dedicated faculty trains the students in CAD.

We have also been conducting three months certificate programme since 1968. The course is accredited by Asian Packaging Federation of which IIP is the founder member and endorsed by World Packaging Organisation. The course is open to overseas participants as well. Both these courses being full time, a need was felt to introduce a Distance Education Course especially for working people who cannot attend the full-time programme. In 1996, the institute has started the Distance Education program for many aspirants who are working in the industry and could not attend our full time courses to improve their professional qualification.

Today we are in the 28<sup>th</sup> year of Distance Education Programme, which is of 18 months duration. This course is also accredited by Asian Packaging Federation and is open to participants from any country. We have been receiving overwhelming responses for this course. For overseas students of this course, we conduct the examination in their city of work. Over the years, we have witnessed a significant growth in the number of students enrolling for this course.

The Institute has started with student in-take of 20 for the 2-year Post Graduate Diploma in Packaging and today, our intake is raised to 500. Appreciation of this course by the industry is seen in the responses we receive for the campus interviews, in which almost all of the students are placed within a few days. The value of our course is recognised through repeat visits of many corporate bodies and MNCs for campus placement. All our students are respectfully placed with exciting job offers. Recently, overseas organisations have flown down and recruited our students.

The success story of these programmes is due to the efforts by the eminent faculty, who support the Educational activities; from renowned educational institutions, the industry and many corporate bodies, through industrial visits and training of our students.



**Dr. Babu Rao Guduri**  
HOD T & E Department

The Indian Institute of Packaging (IIP) is a national apex body which was set up in 1966 by the packaging and allied industries and the Ministry of Commerce, Government of India, with the specific objective of improving the packaging standards in the country. The Institute is an autonomous body working under the administrative control of the Ministry of Commerce.

The Institute endeavours to improve the standard of packaging needed for the promotion of exports and create infrastructural facilities for overall packaging improvement in India. This is achieved through the Institute's multifarious activities which are today, in line with those of premier packaging institutes the world over. The institute aims to make India a focal point for contemporary developments in Art, Science Technology and Engineering, with respect to the field of Packaging.



The Institute began in a very humble way, with an office at Mumbai. It has now expanded, with its Head Quarters at Mumbai and centres located at Delhi, Kolkata, Hyderabad, Chennai and Ahmedabad.

The major activities of the Institute are:

- **Testing, Certification & Consultancy**
- **Research & Development**
- **Training & Education**

The other promotional efforts include exhibition and awards, information services and publications, library and database services.

The Institute has linkages with International organisations and is a founder member of the Asian Packaging Federation (APF); member of the Institute of Packaging Professionals (IOPP), USA; the Institute of Packaging (IOP), UK; Technical Association of Pulp and Paper Industry (TAPPI), USA and the World Packaging Organisation (WPO).

The Indian Institute of Packaging has helped many developing countries in the promotion of packaging through projects carried out for prominent International bodies like the United Nations Industrial Development Organisation (UNIDO), International Trade Centre (ITC), the Commonwealth Fund for Technical Cooperation (CFTC) and the European Union (EU). The Institute has successfully completed many International residential training programmes for APF and WPO.

At present, the Institute has members in varied categories such as Patron Members, Overseas Members, Life Members and large number of Ordinary Members who regularly use the expertise and the services of the institute.

### Exhibition and Design

The institute organises package exhibitions on a regular basis. INDPACK, the Annual National Exhibition organised at various cities around the country, offers the Packaging industry an opportunity to display development in the machinery and material sector. INDIAPACK International, a collaborative effort with exhibition organisers from overseas, organised once in 2/3 years. The institutes also organise industry participation in international exhibitions.



The Permanent Exhibition Centre in Mumbai, Delhi, Kolkata, Chennai and Hyderabad offer display outlets for the products of the industry. Industrial designs are developed as per client's requirements.

### Awards

The Institute, while maintaining its unique position as an internationally reputed organisation responds to the needs of the country and at the same time acts as a window for India's capabilities in Packaging Science and Technology.





### INDIASTAR Awards

IIP has instituted the 'INDIASTAR' Awards, the National award for Excellence in Packaging in the year 1972 to promote and encourage excellence in packaging design, innovation and sustainability, once every two years. Over a period of time, this award programme is firmly entrenched and is most popular as the premier event for India's packaging fraternity.

This biennial INDIASTAR Award is the recognition of excellence in packaging development for functional design and appeal. The INDIASTAR Contest is also open to students under the Student Category.

### PACMACHINE Awards

The Machine Award symbolises achievement in the field of packaging and converting machinery, material handling and testing equipment.

Winning INDIASTAR entries may then compete for the ASIASTAR and the WORLDSTAR Awards.

### Information and Publication

This institute provides information related to the packaging industry, in addition to publishing various monographs and textbooks, seminar papers and directories, periodically.



Packaging India, the official Journal of the Institute published six times a year, is an invaluable source of information for the packaging industry. It is mailed free of cost to members of the Institute, packaging and related institutions all over the world. Individual subscriptions are available on request.

The Institute's publications are available on request at the Head Office and the Regional Centres.

### Library and Internet Services

IIP is privileged to have one of the best reference's libraries in the world, with books, International periodicals, bound volumes of journals; besides a large number of reports, National & International standards, database on products and materials along with reprographic facility also being available. Library facilities are extended to the members of the Institute, all students and faculty.

The IIP library has a rich collection of nearly 7000 textbooks besides several packaging related National and International standards from different countries and organisations on materials, methods and systems, testing and quality control etc., besides having a number of seminars, technical reports and dissertations. The information input is also augmented through over 50 technical journals obtained from various sources in the world, on a regular basis.



Library



## INDUSTRY CONSULTING SERVICES

The Institute undertakes self-sponsored and industry participated applied projects covering different aspects of standards, substitutions of packaging materials, improvements in the designs of packages for a range of products including agricultural produce, marine products, processed food, pharmaceuticals, chemicals, consumer durables, light and heavy engineering products etc. Export packs for fresh fruits and vegetables are developed which include bulk and consumer packs. Consumer and bulk export packs with specification details are developed for pre-cut frozen fruits and vegetables.

### Consultancy Services:

- Package design and development
- Cost-effective packaging for domestic and overseas distribution
- On-the-spot advisory visits
- Techno-economic feasibility studies
- Market research and survey reports
- Projects profile with guidelines for machinery selection, computing investments and working capital as well as establishing economic feasibility.

Some of our esteemed clientele include MNC's, entrepreneurs, government departments, packaging material users and converters.

### Global Initiatives

To meet the growing demands from industrial units, in both, the organised and unorganised sector for qualified technical manpower, the Institute introduced 2-year programme leading to a Post Graduate Diploma in Packaging (PGDP) in 1985. The course is designed to equip candidates with all the facets of packaging activity.

Other courses being offered by the Institute include the Graduate Diploma in Packaging through correspondence - a Distance Education Programme (DEP) 1996, recognised by the World Packaging Organisation (WPO) and accredited by Asian Packaging Federation (APF). The 18-month course, designed primarily for working professionals is open to industry personnel and to students in India, the Asia Pacific Region and other countries.

A 3-month Certificate Course in Packaging introduced in 1968 is conducted at the Head Office and at the Regional Centres, entries of which are on a first-cum-first-served basis. The course is also open to overseas participants deputed by their Governments under various schemes. This course is endorsed by the World Packaging Organisation (WPO).

IIP is probably, the first Packaging Institute in the world to hold a training programme for women entrepreneurs. The 1-month Entrepreneurship Development Programme is organised once a year.

Short Training Programmes, Seminars and Conferences of 1-day to 1-week duration are organised by the Head Office and the Regional Centres throughout the year in various parts of the country, specially designed for working executives as well as professionals needing to update their knowledge in the form of executive development programmes.

Residential Training Programmes – The Institute conducts Residential Training Programmes at its Campus in Mumbai. These programmes are designed to meet the specific requirements of the organisation / industry.



Classroom Session



Training Session



## TESTING AND EVALUATION SERVICES - NABL ACCREDITED LABORATORIES

Over the last 57 years, the Indian Institute of Packaging has been able to establish well-equipped laboratories for testing of various packaging material and packages at its principle laboratory at Mumbai and also its branch offices at Chennai, Kolkata, Delhi and Hyderabad, with continuous efforts towards upgradation. Financial assistance of the Ministry of Commerce and Industry, Government of India is awarded. Today, the Institute is proud to announce that the laboratory has got the facility for testing over 300 parameters covering different areas like mechanical, chemical and physico-chemical properties of packaging material and packages.

Laboratories at the Head Office and regional centres extend testing facilities to the industry for domestic distribution and export, as per National and International Standards like the Bureau of Indian Standards (BIS), International Standards Organisation (ISO), British Standards (BS), American Society for Testing Materials (ASTM) and others. IIP also issues UN Certification for export packages for hazardous goods and equipment calibration standardisation certificates.

### Laboratory

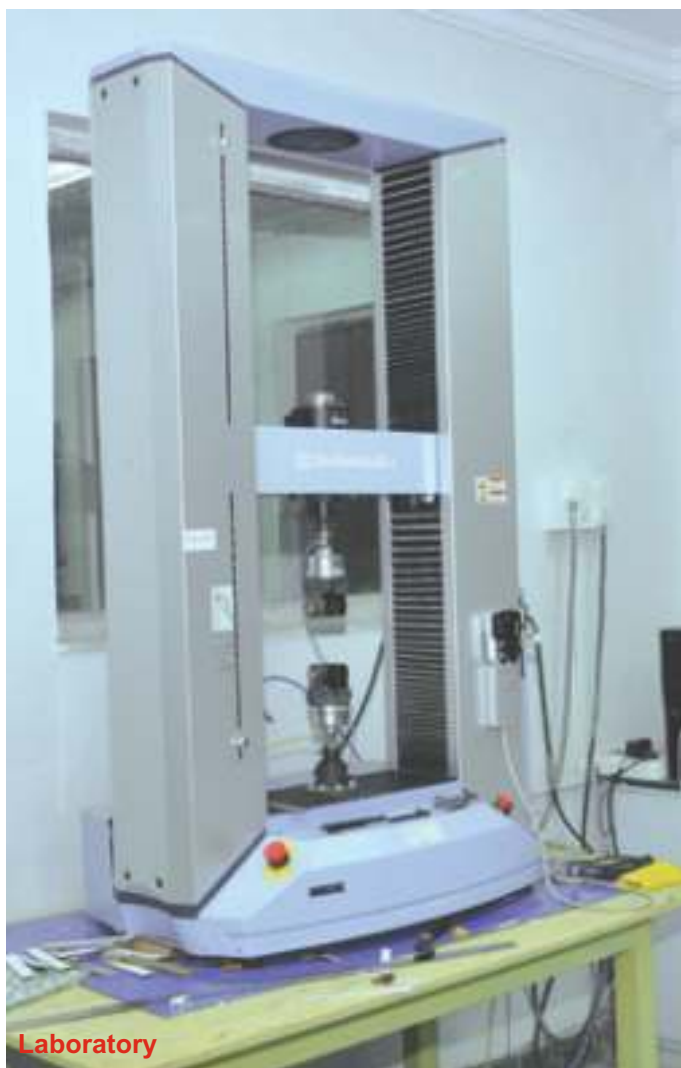
The division comprises of the following laboratories:

- Consumer Package Laboratory
- Material Testing Laboratory
- Optical and Barrier Properties Laboratory
- Chemical Laboratory
- Transport Laboratory

### Activities

Activities carried out include:

- General chemical and material testing
- Testing for transport worthiness of packages
- Testing of packages for the carriage of dangerous goods for export – IMDG and ICAO.
- In-laboratory training programme
- Training programme on testing and quality control
- Testing based consultancy projects
- Microbiology Laboratory



## L a b o r a t o r y



## POST GRADUATE DIPLOMA IN PACKAGING

It was in 1985 that IIP decided to take a step forward in the direction of Packaging Education to meet the growing demands from industrial units, in both, the organised and unorganised sectors for qualified technical manpower. IIP is second in the world, besides USA, to start 2-year Post Graduate Diploma in Packaging. With the inputs of expert educationist under the chairmanship of Dr. D. V. Rege, then Director of UDCT with Dr. V. Gupchup, then Principal of VJTI; Dr. Ravi Talwar; Mr. A. S. Athale; Dr. K. N. Kaul, Technical Director, M/s. Roche Products; Dr. R. Jayaraman, Vice-President, M/s. Britannia Industries Ltd. and others, the curriculum of 2-year full time Post Graduate Diploma in Packaging was developed.

Since packaging is an inter-disciplinary subject, the first semester includes exposure to subjects like Mathematics, Physics, Chemistry, Mechanical and Electrical Engineering.

Packaging Technology is then introduced with detail and elaborate coverage on various packaging media, which includes Paper and Paperboard, Glass, Metals, Plastics and Composites. Similarly, laboratory practical training and visit to packaging converters and user industries are part of the curriculum to expose the students to the practical aspects of the subject.

Since a packaging professional plays a vital role in an organisation, management subjects are also included, such as:

- Production Planning and Control
- Total Quality Management
- Industrial Engineering
- Materials Management
- Marketing and Financial Management

The Post Graduate Diploma course commenced in 1985 and the curriculum is regularly reviewed with addition of new subjects. Some of the subjects recently introduced are eco-regulation, computer aided design & mould design and communication skills, which now form a part of the syllabus.

IIP has a separate computer laboratory for Post Graduate Diploma students, equipped with necessary software, for their training and use. Experienced and dedicated faculty trains the students in CAD.

A large number of factory visits are undertaken in line with the curriculum. These provide the students with practical experience with respect to the packaging industries.

The fourth semester is dedicated to industrial training. Every student is placed in an industry for hands-on practical training. At the end of this semester, a 'Campus Placement' drive is conducted at the Institute in Mumbai, and is open for students of all regions of the Institute. IIP takes pride to convey that it takes effects for 100% placement assistance of students, to date.

The details of the subjects taught in each semester along with the teaching and examination scheme is as detailed in the Tables ahead.

The students are encouraged to showcase their cultural and extracurricular abilities through the yearly 'PACKFEST' programme. It comprises of a series of cultural and technical competitions related to packaging. This festival was introduced at the 24<sup>th</sup> Batch Convocation and is continued till date.







### STUDENTS MERIT AWARD

On the occasion of the 'Silver Jubilee' convocation of the Post Graduate Diploma in Packaging programme (PGDP), it was planned to create a 'Students Merit Award Fund' for the educational activities and the interest amount so generated will be spent every year for making MEDALS for different categories. Thus, all contributions are for perpetuity.

The main objective in awarding Platinum, Gold, Silver and Bronze medals to meritorious students is to motivate the students of Post Graduate Courses and as well as Distance Education Programme (DEP).

The medals will be awarded to the students in the following manner:

- Gold Medal – Overall Top Scorer
- Silver Medal – Overall Second Scorer
- Bronze Medal – Overall Third Scorer

The three toppers of the PGDP from each region will then compete for the topper amongst them all, for a Platinum Medal. A competitive examination on 'packaging' will be held at Mumbai every year before the convocation.

All medals have been sponsored by leading packaging companies and the contribution will be a onetime contribution towards the Students Merit Award Fund. The medal would have the IIP Logo on one side and the logo of the sponsoring company will be embossed on the other side.

### SPONSORS

List of Sponsors for Students Merit Award for Post Graduate Diploma in Packaging (PGDP) and Distance Education programme (DEP).

#### Platinum Medal



#### Gold Medal

#### Silver Medal

#### Bronze Medal

Mumbai	 Parksons Packaging Limited	 Associate Capsules Group	 Electronic Devices
Delhi	 Hindustan Adhesives Limited	 Micro Mechanical Works	 Triveni Polymers Limited
Kolkata	 Manjushree Technologies Limited	 Tata Tinplate Limited	 Avery Dennison
Hyderabad	 ITW Limited	 Ecobliss Limited	 Shivshakti Timber Works
DEP	 DIC Limited	 Hindustan Tin Works Limited	 Perks Engineering

## SUCCESS STORIES

- Placement in leading MNCs, FMCG, converter industries, KPO, food and pharmaceutical companies.
- All round professional and personality development.
- Industry oriented teaching.
- Green campus, reputed faculty, testing laboratories and excellent hostel facility at Mumbai.
- A unique Resource Centre to facilitate placements all over the world. Leading companies, across the world from various disciplines of packaging come for campus placement.

## EMINENT REGULAR RECRUITER

The success continues with a number of eminent recruiters are listed here.

Abbott Laboratories  
Agrocel Industries Pvt. Ltd.  
Agro Tech Foods Limited  
Alpla Limited  
Atul Limited  
Avery Dennison (I) Pvt. Limited  
Agrocel Industries Pvt. Ltd.  
Allana Consumer Products Pvt. Ltd.  
Alpla India Pvt. Ltd.  
Amcor Flexibles India Pvt. Ltd.  
Aptar Pharma  
Asian Paints  
Biostadt India Limited  
Bambrew Plant Fibre Technology Pvt Ltd  
Bliss Chocolates India Pvt. Ltd.  
Britannia Industries Limited  
Castrol India Limited  
Cavinkare Limited  
Chainalytics Pvt. Limited  
Chandras Chemical Entp. Pvt. Limited  
Chep India Pvt. Limited  
Coco-Cola India Inc.  
Creative Polypack Limited  
Cummins India Limited  
Dabur India Limited  
Dolcera ITES (P) Limited  
Dr. Reddy's Laboratories Limited  
Dream Brakes Pvt. Limited  
Eltete India TPC Pvt. Limited  
Emami Limited  
Emami Biotech Limited  
Europack  
Flint Group India Pvt. Limited  
Flipkart Pvt. Limited  
Ferrero India Pvt. Ltd.

Godrej Consumer Products Limited  
Haldiram's Foods International Pvt. Ltd.  
Hawkins Cookers Limited  
Heinz India Limited  
Himalaya Drug Co. Limited  
Hindustan Unilever Limited  
Hersheys  
Integrated Plastics Packaging Inc.  
IPCA Limited  
ITC Limited  
Signode India Limited  
Impel Services P Ltd  
Indofil Industries Ltd  
J K Files & Engineering Ltd (Raymonds)  
Kansai Nerolac Limited  
Kraft Foods Pvt. Limited  
Kris Flexipacks Limited  
Kimberly-Clark India Pvt. Ltd.  
Kris Flexipack  
L'Oreal India Pvt. Limited  
Larsen & Toubro Limited  
Lupin Limited  
Manjushree Extrusion Limited  
Manohar Packaging Pvt. Limited  
Mapro Foods Limited  
Manjushree Extrusion Limited  
Manohar Packaging Pvt. Limited  
Mapro Foods Limited  
Marico Limited  
Maruti India Pvt. Limited  
Mondelez India Foods Pvt. Limited  
Mersheys India Pvt. Limited

Mylan Laboratories  
Mahindra & Mahindra  
Mars Wrigleys  
Moglix  
Mother Dairy Fruit & Vegetable Pvt. Ltd.  
Nestle India Limited  
Nivea (Beiersdorf India Service Pvt. Ltd.)  
Packfora LLP  
Reifenhäuser India Marketing Pvt. Ltd.  
Reliance Retail Ltd  
Safepack Industries Ltd.  
Schaeffler India Limited  
Seedlings India Pvt. Ltd.  
Signode India Ltd.  
Strides Specialities Pvt. Limited  
Stylo Graphic Imaging Pvt. Limited  
Surface Graphics Pvt. Limited  
Switz Foods Pvt. Limited  
Tata Global Beverages Limited  
Tulsian Group of Inds. Limited  
TVS Motor Company  
Uflex Limited  
United Phosphorus Limited  
VE Commercial Vehicles Ltd.  
Walmart India Limited  
Weikfield Food Pvt. Ltd  
Wipro Consumer Care & Lighting  
Wockhardt Limited  
Zobe India Pvt. Ltd.  
Zydus Life Sciences Ltd.



## THE INSTITUTE'S FACULTY

Mr. R. K. Mishra, IRS  
Director, Indian Institute of Packaging

### Mumbai

Dr. Babu Rao Guduri, Joint Director & HOD, T&E  
Dr. Badal Dewangan, Joint Director & HOD, R&D  
Mr. T. M. Mallik, Deputy Director  
Mr. S. K. Juikar, Deputy Director  
Mr. P. G. Meshram, Deputy Director  
Dr. Hemlata Raikwar, Deputy Director  
Mr. A. S. Ravi, Assist. Director  
Mr. Subhash Dalvi, Assist. Director  
Mr. Anil Moule, Assist. Director  
Mrs. Vaishali Ravandale, Technical Officer  
Mrs. Poonam Ved Prakash, Technical Officer  
Mr. Harshad M., Technical Assistant  
Mr. Nitin Raibole, Technical Assistant  
Mr. Swapnil R. Dhopte, Technical Assistant

### Delhi

Dr. Tanweer Alam, Professor (Adhoc)  
Dr. Nilay Kanti Pramanik, Deputy Director  
Mr. Rahul Tirpude, Deputy Director  
Mr. Tushar K. Bandopadhyay, Assistant Director  
Dr. Atul Jadhav, Assistant Director  
Mr. Dinkar Joshi, Technical Assistant  
Mr. Saurabh Tripathi, Technical Assistant  
Mr. Jeetendra Upadhyay, Technical Assistant  
Mr. Sourabh Ghosh, Technical Assistant

### Chennai

Mr. Pon Kumar R., Deputy Director & Regional Head  
Mrs. Shweta Shetty, Assistant Director  
Mr. V. Premraj, Technical Assistant  
Mr. Sachin P. Adakane, Technical Assistant

### Kolkata

Mr. Bidhan Das, Deputy Director & Regional Head  
Mr. Rishu Gautam, Assistant Director  
Mr. Alok Basak, Technical Officer  
Mr. Rahul Maheshwari, Technical Assistant

### Hyderabad

Mr. N. Natraj, Deputy Director & Regional Head  
Mr. Manipati Madan Mohan, Assistant Director  
Mr. S. V. Ramesh, Technical Assistant  
Mr. Nallavalli Nandakishore, Technical Assistant  
Mr. Balakishan D., Technical Assistant

### Ahmedabad

Dr. Amit Singla, Joint Director & Regional Head  
Mrs. Foram A. Badani, Assistant Director  
Mr. R. G. Butani, Technical Officer  
Mr. Arpit Badani, Technical Assistant  
Mr. Jaysukh G. Chandpa, Technical Assistant

## THE GUEST FACULTY

The guest faculty are invited from reputed institutes. Some of them are as highlighted below.

### Mumbai

Indian Institute of Technology (IIT)  
Mumbai University  
Usha Gandhi Pravin College of Management  
Shri Vile Parle Kelavani Mandal Education Institute  
V. K. Krishna Menon College of Commerce &  
Economics  
Tolani College of Commerce  
Thakur College of Engineering and Technology

### Delhi

Dehi University  
Netaji Subhash Institute of Technology  
Delhi Engineering College  
Indian Institute of Technology (IIT)

### Hyderabad

#### Hyderabad

Osmania University  
Jawaharlal Nehru Technical University  
Institute of MSME  
Institute of Chemical Technology

### Kolkata

#### Kolkata

Calcutta University  
Jadavpur University  
Bidhanchandra Krishi Vishwavidyalaya  
Indian Institute of Technology (IIT-KGP)



## PROSPECTUS

### About the Institute

The Indian Institute of Packaging (IIP), an autonomous body, is a National Institute set up in the year 1966 under the administrative control of the Ministry of Commerce, Government of India, with the active support of the Indian industries. Its headquarters and principal laboratories are located on a sprawling campus in Mumbai and its regional centres are located at Chennai, Delhi, Kolkata, Hyderabad and Ahmedabad. Activities of IIP, today, are in line with those of premier packaging institutes the world over. These are Training & Education, Consultancy & Projects, R&D, Package Testing & Quality Evaluation among others.

IIP works in close association with various International organisations. IIP is a founder member of Asian Packaging Federation (APF) and World Packaging Organisation (WPO).

### Course Objective

In recent times, with the globalisation of markets and trade, the role of packaging has assumed greater importance in marketing and distribution of agricultural produce, value added products, industrial products and mass-produced consumer goods. As a result, there is now a demand for technically qualified cadre of people who can undertake design, development, production, quality control as well as make effective use of modern packaging technology.

There are over 7,000 organised industrial units and nearly 4,50,000 small industries in India who use or produce packaging materials and require qualified technical personnel. IIP works in close association with International organisations. IIP is a founder member of Asian Packaging Federation (APF) and World Packaging Organisation (WPO).

The Indian Institute of Packaging has, therefore, to bridge the gap, developed a full time Post Graduate Diploma in Packaging (PGDP) Programme of two year duration, which has become popular in industries since 1987. In the year 2021 IIP has started two-year full-time Master in Packaging Technology (M.S. & M.Sc.) and one year online programme on Certified Packaging Engineers Course (CPEC).

### Curriculum

The curriculum is so designed that the successful candidates would be well-equipped in all major facets of packaging activities and will be easily employable in a package manufacturing, packaging machinery manufacturing or user industries like food, pharmaceuticals, cosmetics and others. With experience, they can also aspire to be self-employed professionals / entrepreneurs in their field.

In order to provide sound technical knowledge and at the same time, acquaint them with industrial practices, the theory sessions have been kept at 70 per cent of the curriculum and the balance 30 per cent is allotted for practical sessions. The theory section includes classroom sessions and library reference work. The practical side includes laboratory exercise, industrial visits, project work and industrial training. Involvement in R&D Activities of the Institute will form an important part of the curriculum.

### Title

The two-years programmes leads to a **Post Graduate Diploma in Packaging (PGDP), Master in Packaging Technology (M.S. & M.Sc.) and one year online programme Certified Packaging Engineers Course (CPEC).**

**Eligibility: Maximum Age 30 years as on 31/05/2023 (Age relaxation: 3 years for OBC & 5 years for SC/ST)**

- For M.S., M.Sc. & PGDP maximum age 30 years as on 31/05/2023 (Age relaxation: 3 years for OBC & 5 years for SC/ST)
- For CPEC no age limit

### M.Sc. and PGDP

A candidate should have passed the full time (not by correspondence or part time) Graduate degree examination in Science (12th + 3 years degree entire 5 years in science only) with Physics / Chemistry / Mathematics Microbiology or Biochemistry as the main subject or one of them as second subject in the three year degree or Agriculture / Food Science/ Polymer Science or Engineering / Technology degree of a AICTE/ recognised University with minimum second class. The candidate needs to have consistently high academic performance and sound general knowledge.

### M.S.

A candidate should have passed the full time (not by correspondence or part time) Graduate degree in Engineering & Technology or four-year graduate in science.

### CPEC

A candidate should have passed the full time (not by correspondence or part time) Graduate degree in Engineering & Technology.

Those with equivalent overseas qualification would also be eligible for admission. The candidate needs to have consistently high academic performance and sound general knowledge. Those with equivalent overseas qualification would also be eligible for admission.

Candidates appearing in the final year of the qualifying examinations can also apply, however, they must submit their results/ provisional results (as given by University) latest on the day of the personal interview and selection, as without their degree result, student are not eligible to appearing for personal interview and will be eliminated from the admission process.

### Admission/Selection Procedure:

The admission for M.S. & PGDP Programmes will be done according to the following two steps:

- Written examination
- Personal Interview

**Note: For M.Sc. candidates may visit GGIPU website for admission/ selection procedure and may contact IIP Delhi Centre.**

## Selection Procedure:

### STEP 1: Written Examination

A candidate seeking admission to the M.S. and PGDP Course will be required to appear in the written Entrance Examination which will comprise of multiple-choice questions. The syllabus for the written test is at the graduate level and the subjects include Physics, Chemistry, Mathematics and Engineering. The candidate has the option to choose questions, provided the number of questions does not exceed a fixed limit. The entrance examination for M.S. & PGDP will be conducted on **30/06/2023** at Mumbai, Kolkata, Delhi, Chennai, Ahmedabad and Hyderabad centers of the Institute. The Institute has the discretion to fix minimum qualifying marks for the examination and short list the candidates who will be eligible for further consideration for admission.

Application for admission to the course needs to be submitted on or before **23/06/2023** along with attested copies of mark sheets and other credentials. Application form, Prospectus and Syllabus can be obtained from 1<sup>st</sup> week of April, 2022 from any center by paying Rs. 500 in cash or by Demand Draft in favour of Indian Institute of Packaging payable at Mumbai or Kolkata or Delhi or Chennai or Hyderabad or Ahmedabad. The forms can also be downloaded from the IIP website. However, such forms should be accompanied with Rs.500 Demand Draft in favour of Indian Institute of Packaging payable at Mumbai or Kolkata or Delhi or Chennai or Hyderabad or Ahmedabad.

### Tuition Fee and Other Fee

#### Fee Structure for PGDP, M.S. and M.Sc.

A.	One Time fee (payable at the time of admission)	Rs. 55,000*
B.	Fees per Semester (Tuition Fee + Exam Fee)	Rs. 70,000*
C.	Refundable Deposit (payable at the time of admission)	Rs. 3,000
D.	Hostel Fees (optional) only in Mumbai	
	1) Payable at the time of admission (Registration fees (Rs. 1000) + Deposit (Refundable Rs. 1000))	Rs. 2,000
	2) Fee per Semester	Rs. 25,000
E.	Fees for application form/syllabus/prospectus/ set of previous year's question papers	Rs. 500
<b>Fees for foreign students = US\$2000 per semester (not included hostel, food &amp; other charges)</b>		

\*Fees + ST as applicable

Total fees payable at the admission = A+B+C+D (optional)

#### Fees Structure for CPEC

S. No.	Details	Amount (Rs.)	GST 18% (Rs.)	Total (Rs.)	Due Date
	Registration Fee	250/-	45/-	295/-	During Registration
	Fee for I-Semester (incl. one time Admission fee of Rs. 10,000/-)	30,000/-	5,400/-	35,400/-	Before commencement of the course (31st May, 2023)
	Fees for II-Semester	20,000/-	3,600/-	23,600/-	Before 15th Nov. 2023
	Fees for III-Semester	20,000/-	3,600/-	23,600/-	Before 15th March, 2024
	<b>Total Fees</b>			<b>82,895/-</b>	
<b>Fees for foreign students = US\$1500 per semester (including Form Fee and Service Tax)</b>					

### STEP 2: Personal Interview

Candidates, who clear the written examination as above, will be called for Personal Interview which will be held at the Mumbai, Kolkata and Hyderabad centers of the Institute.

The Institute has the discretion to fix minimum qualifying marks for Personal Interview which will make a candidate eligible for further consideration for admission. The final selection of candidates for admission to the course will be done in the order of their merit which will be based on the aggregate of marks calculated in each case according to the following weightage:

#### For M.S. & PGDP

- (i) Marks obtained in 10th Class/Matriculation: 10%
- (ii) Marks obtained in 12th Class/Sr. Secondary: 10%
- (iii) Marks obtained in Graduation level: 30%
- (iv) Marks obtained in the Entrance Examination: 30%
- (v) Marks obtained in Personal Interview: 20%

Display of 1st list will be based on the 1st round cut-off. The 2nd list display is on the basis of 2nd round cut-off. Further lists will be displayed on the availability of seats when necessary.

**Note 1:** For M.Sc. Candidates should visit Guru Gobind Indraprastha University ([www.ipu.ac.in](http://www.ipu.ac.in)) for Application form, Entrance, Personal Interview and other information.

**Note 2:** For CPEC, no entrance and candidates may submit application forms directly or online mode.



### Fees Payment

Fees for the subsequent semester should be paid as follows for M.S., M.Sc. and PGDP.

2<sup>nd</sup> Semester: 16<sup>th</sup> Dec. 2023 to 8<sup>th</sup> Jan., 2024

3<sup>rd</sup> Semester: 26<sup>th</sup> June to 13<sup>th</sup> July, 2024

4<sup>th</sup> Semester: 15<sup>th</sup> to 31<sup>st</sup> Dec., 2024

**Note:** The fees for the Semester II & III have to be paid prior to the commencement of the Semesters. Appropriate late fee of Rs. 100/- per week will be charged. All fees are to be paid by DD (in favour of Indian Institute of Packaging). Semester (2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup>) fees once paid will not be refunded under any circumstances.

### Cancellation of admission & Refund of fees

- Cancellation on/before commencement of the course 10% deduction, balance will be refunded.
- After commencement of the course, within 15 days 25% of fee deduction
- Within 1 month 50% of fee deduction
- After 1 Month No refund of fees

### Hostel

The programme is non-residential. However, separate hostel accommodation for boys and girls on a twin sharing basis (with mess facility) is available only in Mumbai. There are limited rooms and is provided on first-come reserved basis, for only the students residing outside Mumbai.

### Seats

The seats for every academic year as follow:

Mumbai (PGDP) -	280	Delhi (M.Sc) -	100
Kolkata (PGDP) -	80	Hyderabad (M.S.)-	40
Chennai - 60 (CPE reservation applicable)			

Seat reservation is as per the Government norms as below.

OBC -	27.0%
SC -	15.0%
ST -	7.5%

### Academic Calendar

Admission Open	:	1st April, 2023
Last Date of Form Submission	:	21st July, 2023
Entrance Exam	:	23rd July, 2023
<b>Semester I</b>	:	<b>August to December, 2023</b>
Semester I - Diwali Break	:	8th to 18th November, 2023
Semester I - Examination	:	December, 2023
Semester Break	:	15th to 31st January, 2024
<b>Semester II</b>	:	<b>February to June 2024</b>
Semester II - Examination	:	June, 2024
Semester - Break	:	July, 2024
<b>Semester III</b>	:	<b>August to December, 2024</b>
Semester III - Diwali Break	:	26th October to 7th November, 2024
Semester III - Examination	:	December, 2024
Semester III - Break	:	15th to 31st January, 2024
<b>Semester IV</b>	:	<b>February to July, 2025</b>
Semester IV - Presentation and Viva	:	July, 2025

### Semester Examination

A candidate for the M.S., M.Sc., PGDP and CPEC is required to pass three semester examinations and successfully complete the last semester devoted to industrial training and project work. Candidate with minimum 75% attendance in each subject will be allowed to appear for the Semester Exam.

### Passing Criteria

For eligibility of M.S., M.Sc., PGDP and CPEC, a candidate must obtain at least 40 per cent marks in each paper and practicals. In addition, the candidate must obtain at least 50 percent in the aggregate.

### Provision for ATKT

A student will be given an ATKT provide his/her overall performance is good and he / she is not falling in more than two subjects.

### Re-examination for PGDP and CPEC

A re-examination will be conducted for students who have cleared Sem1 and Sem 2 and failed to clear Sem 3, Sem 3 Re-examination will be conducted before the convocation of that batch for PGDP and CPEC.

**Note:** M.S. and M.Sc. students should follow Jawaharlal Nehru Technological University (JNTU) & Guru Gobind Indraprastha University (GGIPU) guidelines accordingly.

### Grade

- A** - 70% and above First Class with Distinction  
**B** - 60% and above First Class but less than 70%  
**C** - 50% and above Second Class but less than 60%

### Students Award (PGDP, DPC & CPE)

Subject toppers in packaging technology are awarded special certificate.

Platinum, Gold, Silver and Bronze medals would be awarded to meritorious students so as to motivate the students of PGDP, DPC & CPE.

The medals will be awarded to the students in the following manner:

- Gold Medal** – Overall Top Scorer
- Silver Medal** – Overall Second Scorer
- Bronze Medal** – Overall Third Scorer



The three toppers of the PGDP from each region will then compete for the topper amongst them all, for a Platinum Medal.

### Code of Conduct

Following is the Code of Conduct which all the students enrolled for any of the courses organised by IIP need to follow:

Any violation of the code will attract disciplinary action. The disciplinary action will be entirely decided by the management of the Institute, and which may amount to removal of the student(s) from the course.

- All the students will be punctual in their attendance in the classroom and will be seated before the session starts as per the time-table.
- Students will behave properly in the classroom and within the campus of the Institute and will maintain the decorum.
- Decent dress code to be followed by the students.

Following conduct / acts will be considered as violation of the code of conduct and is required to be followed by all the students:

- ❖ Entering the classroom after the session / lecture has started /commenced.
- ❖ Leaving the classroom, before the lecture/session is completed without the permission of the faculty .
- ❖ Speaking loudly and among each other, during the progress of the lecture/session.
- ❖ Any kind of teasing, abusing, using bad words, unparliamentary language with any of the students, staff of students, staff of IIP, faculty, visitors or any other person within the campus of the Institute.
- ❖ Consumption of alcoholic drinks, smoking, consuming any undesirable products within the campus.
- ❖ Humiliating, insulting in any manner with the staff of the institute, faculty or any guest, within the campus.
- ❖ Misplacing, stealing of any items or property, belonging to any of the students, staff, faculty or the Institute.
- ❖ Misbehaviour in any manner with any of the students, staff, faculty or visitor in the Institute.
- ❖ Bringing in the campus, any undesirable person, product, pet, without prior authorization.
- ❖ Talking with other students, copying, exchanging material, papers during the examination.
- ❖ Littering with wrappers, paper etc. in the classroom, campus etc.
- ❖ Mishandling/misusing learning aids/books/instruments of the Institute.
- ❖ Ragging in any manner with any student in the campus.
- ❖ Eating in classroom, making noise in the corridor etc.
- ❖ Using mobile phones / its accessories in the classroom / laboratory.
- ❖ Copying presentations, lecture notes from laptops without prior permission of the respective faculty.
- ❖ Roaming in the office premises, campus without any reason.
- ❖ Destroying plants / greenery in the campus.
- ❖ Internet surfing in the classroom other than the time slot time slot allotted, specifically for the purpose.
- ❖ Any act not mentioned above, but undesirable in the academic field.





### Library Facility

The Institute has a well-equipped library with over 7,500 Indian as well as foreign books, in addition to reference books, journals, standards etc.

### Dissertation / Library Reference Work

The student is expected to submit a typed report at the end of each semester as dissertation on library reference work, for evaluation. The subject for dissertation would be prescribed by the Institute.

### Industrial Visits

Number of industrial visits are organised for the students during Semester I and II with a view to expose them to actual industrial processes and give an opportunity to acquire practical experience on packaging and non-packaging related subjects.



### Additional Topics

To improve the skill of the students, new topics and additional lectures will be introduced.

### Practical Examination

The methodology of practical examinations is detailed by the faculty. Normally, students will be required to plan work, perform experiments, report results and give interpretation of the same.

During practical examinations, emphasis is laid on the methods of working and accuracy of results, rather than on information that is asked during the theory examinations.

The practical examinations are held in Packaging Technology and other related subjects only.

### Industrial Training

During the 4th semester, candidates are assigned to Industrial Training for 5 Months. Each candidate is required to submit a typed report (2 copies) as 'Project Work' providing methodology, findings etc. in detail as a part of industrial training.

Performance during industrial exposure, provided in the industrial unit, is evaluated based on the report to be submitted by each candidate and necessary assessment / certificate as may be obtained by the Institute from the concerned unit. 300 marks are assigned for industrial training and project work and 300 marks for overall performance of the candidate in all four semesters.

Marks are based on regularity in attendance (minimum 75%), conduct and progress as reported by the industrial supervisor, quality of report and viva-voce examination, besides behaviour etc.



**Master in Packaging Technology (M.S.)**  
**(Affiliated by Jawaharlal Nehru Technological University, Hyderabad)**  
**Teaching Scheme - Semester I**

Subject Code	Name of the Subject	Theory	Practicals	Total Credits
PTC - 101	Packaging Materials & Characterization – I	04	-	04
PTC - 102	Product Package Development	04	-	04
PTC - 103	Package Printing Technology	04	-	04
PTC - 104	Ancillary Packaging Materials	03	-	03
PTC - 105	Communication Skill & Report Writing	02	-	02
PTL - 101	Material Testing Laboratory-I	-	04	02
PTL - 102	Package Design Laboratory-I	-	04	02
	Elective – I	03	-	03
	<b>Total</b>	<b>20</b>	<b>08</b>	<b>24</b>
	<b>Elective - I</b>			
➤ PTE1011	Plastics Processing & Conversion Technologies			
➤ PTE1012	Packaging Distribution & Logistics			

**Note:** 1. Student may select one of the elective subject  
2. One credit equal to two hours teaching session

### Packaging Materials & Characterizations

Paper & Paper Board, Raw Materials, Manufacturing, Types of papers, Speciality papers, Cartons, Designs, Applications, Corrugated Fibreboard, Composite containers, Fibre drums, Plastic Materials, Thermoset, Thermoplastic, Engineering Plastics, Properties and Applications in packaging.

### Product Package Development

Packaging and Modern Merchandising, Marketing Requirements, Brand Management, Product Life cycle, Managing the Packaging Function, Project Scope, Consumer Research, the features of a package.

### Package Printing Technology

Introduction to Screen Printing Process, applications of the process, Identification, Stencil Systems-Screen Automatic screen printing machinery, Screen Printing Technique.

### Ancillary Materials in Packaging

Cushioning, theory of adhesion,

types of adhesives, applications of Adhesives, Caps, Closures, Dispensers, new generation Dispensing Closures, Labels, types of labels smart and intelligent Labels, Security Labels, other Ancillary materials.

### Communication Skill & Report Writing

Communication Introduction, Definition, Nature and Scope of Communication, Importance and Purpose of Communication; Oral Communication Exercises- Written Communication Exercises.

### Plastics Processing & Conversion Technologies

Extrusion-Basic Principle of Extrusion, Extruder Parts, Types of Extruder, Process, Injection Moulding-Principle, Machine, Processing, Process Variables, Mould Cycle, Types of Injection Mould, Rotational Moulding-Principle Machine.

### Packaging Distribution & Logistics

Introduction to Logistics -Elements of Logistics - Supply Chain

Management & Distribution; Classification of Pallets-Standards- Constructions-Pallet Treatment Techniques; Concept of Containerization.

### Material Testing Laboratory – I

Testing of paper and paperboard such as grammage, thickness, cobb, treating resistance, tensile, compression, burst strength, burst factor, RCT, crush test, stiffness, scuff resistance, gloss, haze, moisture.

### Packaging Design Laboratory

Create 2D drawings in CAD software using Different basic shapes; Create Isometric views of different objects/packages; Create a 3D design; By manipulating 2 D vector graphics; Design an art work / graphics for a corrugated fibre board box.

### Elective - I

- Plastic Processing & Conversion Technologies
- Packaging Distribution & Logistics.

**Master in Packaging Technology (M.S.)**  
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**Teaching Scheme - Semester II**

Subject Code	Name of the Subject	Theory	Practicals	Total Credits
PTC - 201	Packaging Materials & Characterization – II	04	-	04
PTC - 202	Package Finishing Operations	03	-	03
PTC - 203	Packaging Economics	04	-	04
PTC - 204	Pharmaceutical & Medical Device Packaging	04	-	04
PTC - 205	Material Testing Laboratory-II	-	-	04
PTL - 206	Packaging Design Laboratory-II	-	04	04
PTP - 207	Seminar - I	02	04	02
	Elective – I	03	-	03
	<b>Total</b>	<b>20</b>	<b>08</b>	<b>28</b>
	<b>Elective - II</b>			
➤ PTE2011	Plastics Processing & Conversion Technologies			
➤ PTE2012	Packaging Distribution & Logistics			

**Note:** 1. Student may select one of the elective subject  
 2. One credit equal to two hours teaching session  
 3. Seminar-I, individual project work and industrial visits

#### Packaging Materials and Characterization-II

Metals in Packaging & their properties, Steel based: Stainless & Galvanized Steel - Coated steels like Tinplate, Tin free Steel - Polymer coated - properties & their applications, Metal Cans – Two piece, Glass production, Basic processes of glass making, Quality control & testing.

#### Package Finishing Operations

Technical & Commercial Considerations, Functional Basics of Decoration, Consumer Attributes, Functions and Limitations-Deception, linking various printing processes to package design formats, Designing, Manufacturing, Direct Printing Techniques on Packaging Substrates.

#### Packaging Economics

Introduction - Introduction to Economics - Law of supply and demand, Economic Analysis - Installation and running cost of services, Break-even analysis, Cash flow analysis, Risk Analysis and Management Practice, Basic demand supply analysis -Market analysis, Packaging Economics - Basic economics, Cost Effective Packaging - Guidelines.

#### Pharmaceutical & Medical Device Packaging

Characteristics of Pharmaceuticals & Drugs, Pharmaceutical Product - Definition of Drug Characteristics - Stability-Chemical change / Reactions, Packaging of Drugs & Pharmaceuticals, Aseptic Packaging - Types & systems -Injectable and orals/oointments, Medical Device - Medical Devices Regulatory System and Packaging standards (EU & US)

#### Plastic Mould & Die Design

Introduction - Plastic Product Design Criteria, Moulding Considerations, Materials for Mould -Types of Ferrous and Non-Ferrous Materials, Machining Methods/ Tools/ Machines, Injection Mould-Mould Dimension Calculation, Mould Components, Extrusion Die - Types of Dies, Design Consideration.

#### Industrial Products Packaging

Industrial Products Classification, Difference between consumer and industrial products packaging needs, Susceptibility to corrosion, Theory of corrosion, Corrosion inhibitors (VCI/VPI) - types / varieties / properties, Protective

Measures, Theory of cushion and cushion design, Wood-Packaging material, Other packaging materials & forms.  
Seminar - 1

#### Individual Project work and Industrial Visits

Material Testing Laboratory - II Plastics, Woven Sack, Barrier Properties, Optical Properties and Extractability test for plastics

#### Packaging Design Laboratory-II

Create 2 D & 3 D Modelling, create 2D & 3D Modelling and Package Performance Simulation for bottles, Create 2 D & 3 D Modelling and Package Performance Simulation for CFB

#### Elective - II

- Plastic Mould & Die Design
- Industrial Products Packaging



**Master in Packaging Technology (M.S.)**  
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**Teaching Scheme - Semester III**

Subject Code	Name of the Subject	Theory	Practicals	Total Credits
PTC - 301	Specialty & Innovative Packaging Technology	04	-	04
PTC - 302	Packaging Laws and Regulations	03	-	04
PTC - 303	Packaging Machinery	04	-	04
PTC - 304	Entrepreneurship Evolution & Management	04	-	03
PTC - 305	Transport Simulation Laboratory	-	-	04
PTL - 306	Packaging Design Laboratory-III	-	04	04
	Seminar - II	02	04	02
	Elective - III	03	-	03
	<b>Total</b>	<b>20</b>	<b>08</b>	<b>28</b>
	<b>Elective - III</b>			
➤ PTE3011	Plastics Processing & Conversion Technologies			
➤ PTE3012	Industrial Products Packaging			

**Note:** 1. Student may select one of the elective subject  
2. One credit equal to two hours teaching session  
3. Seminar-I, individual project work and industrial visits

**Specialty & Innovative Packaging Technology**

Specialty Packaging, Retort and Aseptic packaging, Active Packaging, Food Additives – Preservatives – Sachets & pads – Oxygen scavengers – Flavour absorbers-antimicrobial system – etc, Smart and Intelligent packaging, Time-Temperature indicators (TTI) - Biosensors, Technology of canning - New development in flexible packaging for foods.

**Packaging Laws and Regulations**

Standards, Bureau of Indian standard, standardization, Quality standards Legal Meteorology Act, FDA/ AGMARK rules and regulations, Eco- regulations, eco labelling, Pollution control related to packaging, IMDG, ICAO, Life Cycle Analysis, Export Regulations, recent FSSAI act, RFID, Barcode Markings & Labelling on Transport packaging.

**Packaging Machinery**

Packaging Machinery Types / Classification & Application, Packaging Machineries – Conversion, Packaging Machineries-for Line Operations and Systems Ancillary Machinery & Equipment's, Other Equipment's.

**Entrepreneurship Evolution & Management**

Entrepreneurship Development - Definition, Need, Qualities required, Environment, Production Management - Introduction, definition of products, production, Productivity- Definition, Importance, Benefits of increased productivity, Materials Management.

**Food Packaging Technology**

Introduction to Food Packaging Technology: Principles of Food Preservation, Food processing techniques and practices, Recent development in food packaging technology: Aseptic Packaging, MAP/CAP, Retort packaging, Vacuum Packaging, Packaging of milk and milk products; Fresh & Process Foods, Bakery products, confectionery.

**Sustainability & Circular Economy in Packaging**

Concept of Sustainability – Principles & Concepts, Design Guidelines for Sustainable Packaging, Concept of Compostable, Biodegradable & Bio based Packaging Materials, Source Reduction – Various Waste Disposing Techniques, Environmental policies of India, Case Studies of Life Cycle Assessment in Packaging.

**Seminar – II**

**Individual Project work Transport Simulation Laboratory**

Compression (Different Types of Materials), Inclined Impact, Drop, Vibration, Rolling, Stack load, pray / Rain, Hydraulic pressure, Leakage test.

**Packaging Design Laboratory-III**

Use any one of the Solid Modelling Packages cited below and generate a solid model for a different 3D Packaging Samples Container UNIGRAPHICS / CATIA/ PROE/IC3D/ ETC.

**Elective - III**

- Food Packaging Technology
- Sustainability & Circular Economy in Packaging

**Master in Packaging Technology (M.S.)**  
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**Teaching Scheme - Semester IV**

Sr. No.	Subject	Duration	Total Credits
1	Industrial Training & Report	5 monts	18

- Note:**
1. To Submit hard book binding report as Project based on training and Viva-Voce.
  2. Marks will be assigned on the basis of regularity in attendance, conduct and Progress
  3. \*To submit typed report as Project work based on training and viva-voce.
  4. \*\*Marks will be assigned on the basis of regularity in attendance, conduct and progress.
  5. One Credit Hour is 1hr 15 mins.

**Summary Sheet**

Subject	Credit Hours				
	Theory Subjects	Practical	Seminar	Projects/Dissertation	No. of Credits
Semester - I	6	2	-	-	24
Semester - II	5	2	1	-	28
Semester - III	5	2	1	-	28
Semester - IV	-	-	1	5	18
<b>G. Total</b>	16	6	3	5	98

**CAMPUS PLACEMENTS**

At the end of the Semester IV campus placement is arranged, wherein, students have the opportunity to face interviews arranged with a number of interested companies including from abroad. Campus placement interviews will be conducted at Hyderabad centre.

Assistance in Placement will be provided by the Institute only to the Students who have 90% attendance in all the semesters in all the subjects. Student with less than 90% attendance will not be allowed to appear in the Campus Placement Procedure.

**Master of Science in Packaging Technology (M.Sc)**  
**(Affiliated by Guru Gobind Singh Indraprastha University, Delhi)**  
**Teaching Scheme - Semester I**

Subject Code	Name of the Subject	Theory	Practicals	Total Credits
MSPT - 101	Elements of Mathematics	03	-	03
MSPT - 102	Elements of Science (Chemistry & Physics)	03	-	03
MSPT - 103	Electrical Science & Electronics	03	-	03
MSPT - 104	Applied Mechanics	04	-	04
MSPT - 105	Mechanical Technology	04	-	03
MSPT - 106	Fundamental of Packaging	04	-	03
MSPT - 107	Paper & Paperboard Technology	04	-	03
	Practical			
MSPT - 108	Laboratory – I	-	04	02
MSPT - 109	Engineering Drawing	-	04	02
MSPT - 110	Project Work– I	-	08	04
	<b>Total</b>	<b>25</b>	<b>16</b>	<b>30</b>

**Note: Industrial Visit / Field Visit**

**Elements of Mathematics:**

Introduction, Types, Operations, Differential Calculus, Differential Theorem, Differential Equations, Algebra, Polynomials, Business, Mathematics, Introduction to Statistics, Multiple & Partial-Correlation. Theory of Probability.

**Elements of Science (Chemistry & Physics)**

Atomic Structure and Chemical Bonds, Periodic properties, Organometallic Chemistry, Thermodynamics, Electrochemistry, Viscosity, Motion, velocity and acceleration, Force and laws of motion, Optics, Introduction to Quantum Mechanics, Lasers and Applications, Ultrasonics, Solid State Physics, Semiconductors.

**Electrical Science and Electronics**

Electrical currents and their effects. Ohm's law, O H lines, A C circuits, Power in A C Circuits, Introduction to basic components R-L-C their characteristics, Semiconductor P-N junction diode, zener diodes NPN & PNP, Introduction to power electronic devices, Definition of combinational circuits and sequential circuits.

**Applied Mechanics**

Force System and Moment of Inertia, Parallelogram Law, Triangle Law; Resultant of Concurrent, Friction,

Application to analysis of inclined plane, wedge and block system screw jack, Stresses and Strains, Relation between E, G & K, Analysis of Beams: Stability under Eccentric loading for vertical members.

**Mechanical Technology**

Manufacturing Processes, Study of role of different types of milling cutters, Kinematics, Mechanical Drives, belts and ropes, stepped pulleys, Fluid Power, Application of hydraulic and pneumatic machines in industry, Construction and working of gear, screw, reciprocating, centrifugal.

**Fundamentals of Packaging**

Historical background, review of the earlier period and forecast for the packaging Industry, Growth of Packaging sciences, Modern society and packaging needs, Standards, Definition of Packaging, Functions, Properties, Types of Hazards, Types of corrosion; Prevention of corrosion by packaging.

**Paper & Paperboard Technology**

Cellulose Technology, Types of Paper and Paper Boards used in Packaging, Machinery for Manufacturing, Additives used in Paper and Paper board Packaging,

Paper Grade, Specialty papers, Characterization & Applications; Quality parameters of Paper & Paperboard in Packaging. Applications of Paper, Paperboard.

**Engineering Drawing**

Introduction to computer Aided sketching, Orthographic Projections of Points and Lines, Orthographic Projections of Planes, Projections of Solids, Sections of Solids and Development of Surfaces, Multi View Orthographic Projections, Isomeric Projection.

**Practical**

Physical, Mechanical and Chemical Properties of the Paper and Paperboard. Wax content; Bitumen content; Chromo coating; Blocking resistance; Bleeding resistance; Grease Resistance; Soap jelly test; Wax pick no; Scuff Proofness.

**Project Work**

Objective of this project is to develop an understanding of the principles of Packaging and allied subjects for knowledge in the Packaging Technology stream. The project work is to be allotted based on the 1<sup>st</sup> Semester subjects. The students work under the supervision of one of the faculty members at the institute.



**Master of Science in Packaging Technology (M.Sc)**  
**(Affiliated by Guru Gobind Singh Indraprastha University, Delhi)**  
**Teaching Scheme - Semester II**

Subject Code	Name of the Subject	Theory	Practicals	Total Credits
MSPT - 201	Plastic Technology	04	-	04
MSPT - 202	Rigid Packaging Materials	03	-	03
MSPT - 203	Ancillary Packaging Materials	03	-	03
MSPT - 204	Printing Technology	03	-	03
MSPT - 205	Tooling & Designs for Mould in Packaging	03	-	03
MSPT - 206	Packaging Machinery	03	-	03
MSPT - 207	Communication Skills (NUES)*	03	-	03
	Practical			
MSPT - 208	Laboratory – II	-	04	02
MSPT - 209	Engineering Drawing	-	04	02
MSPT - 210	Project Work– II	-	08	04
	<b>Total</b>	<b>22</b>	<b>16</b>	<b>30</b>

**Note: Industrial Visit / Field Visit \***

#### Plastic Technology

Introduction & Definitions of Polymers a Plastics, Natural polymers, Plastics in Packaging Properties and Applications, Injection moulding, Extrusion, Thermoforming, Rotational moulding, Foam plastics, FRP process, Laminations, Coatings.

#### Rigid Packaging Material

Corrugated Fiberboard Box, General, Types; Styles, Types of Flutes, Manufacturing process; Properties; Application, Fiberboard Containers & Drums, Composites, Metal containers, Wood: Wooden Containers, Plywood containers, Containerization and palletization, Glass.

#### Ancillary Material

Types of the Ancillary Material, Properties applications, Role in Packaging, Cushioning, Reinforcement, Textile & Cotton Bags, Aluminium foil- Quality Evaluation; adhesives, Labels and labelling, Seals & Closures, Closures for bottles, cans, jars, caps, stoppers.

#### Printing Technology

Introduction to different Printing Processes Printing Techniques,

Lithography, Gravure, Flexography, Screen Printing, UV Printing, Characterization, Flexographic inks, Gravure inks, Screen inks, Print Finishing and Converting Quality control.

#### Tools & Mould Designing

Design of injection moulds, Concept of Mould construction, Blow moulds, Construction of blow moulds, Materials of constructions. Extrusion Dies, Product Design, Designing for packaging applications; Materials, processors & selection of packages for various applications. Use of CAD/CAM in mould design & manufacturing.

#### Packaging Machinery

Types of Packaging Machinery, Equipment for filling tubes, Nonliquids, rigid preformed container machinery, Inplant plastic bottle making; Laminating, Hot melt – use, method, equipment; Vacuum and gas packaging, method, application, equipment. Packaging of pottery and ceramics; Latest developments in packaging machinery.

#### Communication Skills

Communication, Introduction, Definition, Nature and Scope of Communication, Importance and Purpose of

Communication, Process of Communication, Types of Communication. Basic Remedial Grammar, Vocabulary and usage, Spoken English Communication Speech Drills Pronunciation and accent Stress and Intonation.

#### Practical

Physico-mechanical Properties of Plastics, Woven Sack, Water Vapour Transmission Rate (WVTR) & Oxygen Transmission rate (OTR). Metals, Adhesives, Solid content; Viscosity; Tack

#### Machine Drawing

Missing Views, Threads, Nuts & bolts, Keys & Coupling, Plane and Spring Washers, Keys and Couplings. Detail and Assembly Drawing of different keys and Couplings: Bearings, Details and Assembly Drawing of Footstep Bearing.

#### Project Work

Objective of this project is to develop an understanding of the packaging machinery, processing, rigid packaging materials, Printing and Mould design subject getting knowledge in Packaging Technology stream. The project work to be allotted based on the 2<sup>nd</sup> Semester packaging subjects. The students to be work under supervision of one of the faculty members at the institute.

**Master of Science in Packaging Technology (M.Sc)**  
**(Affiliated by Guru Gobind Singh Indraprastha University, Delhi)**  
**Teaching Scheme - Semester III**

Subject Code	Name of the Subject	Theory	Practicals	Total Credits
MSPT - 301	Entrepreneur Evolution and Management	04	-	04
MSPT - 302	Economics & Financial Management	04	-	04
MSPT - 303	Operation and Supply Chain Management	04	-	04
MSPT - 304	Packaging Laws and Regulations	03	-	03
MSPT - 305	Product Packaging	04	-	04
MSPT - 306	Human Values and Professional Ethics*	03	-	03
	Practical			
MSPT - 307	CAD/CAM & Package Design	-	04	02
MSPT - 308	Laboratory - II	-	04	02
MSPT - 309	Project Work- II	-	08	04
	<b>Total</b>	<b>22</b>	<b>16</b>	<b>30</b>

**Note: Industrial Visit / Field Visit \***

**Entrepreneur Evolution and Management**

Entrepreneurship Development, Sick Industries, Reasons & Rehabilitation and Project report preparation, Production Management, Functions of production planning & control, Materials Management, Demand forecasting, Market Management, Distribution strategy, analysis of data, international marketing, case studies.

**Economics and Financial Management**

Basic Concepts, Definition, Assumptions, Overview of Indian Economy, Demand & Supply, Market Structure, Nature of production, Introduction to Financial Accounts, Cost Accounts Basic of Finance, Investment Analysis, Financial Management.

**Operations and Supply Chain Management**

Material Management, functions, policies, outsourcing; make or buy decisions, vendor development and rating, Storage and warehousing concepts, supply chain, structure, complexity, key issue, Transportation decision, Distribution and logistics in Supply Chains, Supply Chains Performance Management.

**Packaging Laws & Regulations**

Standards, Bureau of Indian standard, standardization, Quality standards. Legal Meteorology Act, Weights and measures Acts, FDA/ AGMARK rules and regulations, Eco- regulations, ecolabeling, Counterfeiting, IMDG, ICAO, Life Cycle Analysis, Export Regulations.

**Product Packaging**

Introduction to Food Technology, MAP/CAP, Retort packaging, Vacuum Packaging. Methods of storage, Packaging of milk and milk products; bakery products, confectionery, Packaging of Pharmaceuticals: Packaging of Toiletries Packaging of Light engineering goods. Packaging of Textiles and Readymade garments. Packaging of sports goods. Packaging of handicrafts.

**Human Values and Professional Ethics (NUES)**

Introduction to Value Education, Understanding the need, basic guidelines, Methods to fulfil the human aspirations, Harmony in the Human Being, Understanding the Harmony of "I" with the body, Basics of Professional Ethics, Ethical Human Conduct, Professional Ethics in practice.

**CAD /CAM & Packaging Design**

Introduction to design 2D & 3D dimensional Design, study of visual elements, principles of typography, introduction to visual ergonomics, understanding the relationship between consumer & communication design, creating 3D objects etc., in Auto CAD/CAM.

**Practical**

Corrugated Fiberboard Box, Transport Test, Hessian, Adhesive tape, Shelf Life Studies of Food related products.

**Project**

Objective of this project is to develop an understanding project packaging, laws and regulations, CAD/CAM, Packaging Design, Management and supply chain subject for getting knowledge in Packaging Technology stream. The project work to be allotted based on the 3<sup>rd</sup> Semester packaging subjects. The students to be work under supervision of one of the faculty members at the institute.

**Master of Science in Packaging Technology (M.Sc)**  
**(Affiliated by Guru Gobind Singh Indraprastha University, Delhi)**  
**Teaching Scheme - Semester IV**

Sr. No.	Subject	Theory	Practical	Total Credits
MSPT-401	Industrial Training / Major Project in Packaging Technology	-	-	20
	<b>Total</b>	-	-	<b>20</b>

### INTERNSHIP

The students will have Industrial training for 5 Months at various packaging & allied industries. During their training they will get hands on industrial exposure. The industries assign the specific tasks relating to packaging operations / packaging development or short projects requiring study / designing / developments in packaging.

### CAMPUS PLACEMENTS

At the end of the Semester IV campus placement is arranged, wherein, students have the opportunity to face interviews arranged with a number of interested companies including from abroad. Campus placement interviews will be conducted at Delhi centre.

Assistance in Placement will be provided by the Institute only to the Students who have 90% attendance in all the semesters in all the subjects. Student with less than 90% attendance will not be allowed to appear in the Campus Placement Procedure.



Industrial Visit



## Post Graduate Diploma in Packaging (PGDP)

### Teaching Scheme - Semester I

Sr. No.	Name of the Subject	Theory No. of Credits	Practicals	Examination Duration	Marks
1.	Mathematics I	18	-	2 hrs	50
2.	Science (Chemistry and Physics)	18	-	2 hrs	50
3.	Electrical Technology	18	-	2 hrs	50
4.	Applied Mechanics I	36	-	3 hrs	100
5.	Mechanical Technology	18	-	2 hrs	50
6.	Engineering Mechanisms	18	-	2 hrs	50
7.	Introduction to Principles of Packaging	18	-	2 hrs	50
8.	Paper and Paperboard	18	-	2 hrs	50
9.	Glass Technology	18	-	2 hrs	50
10.	Introduction to Plastics and Polymers	18	-	2 hrs	50
11.	Project Work	-	-	2 hrs	50*
12.	Engineering Drawing	18\$	-	2 hrs	50
13.	Industrial / Field Visit	85	-	2 hrs	G#
14.	Practical's (Packaging Technology)	54	54	2 hrs	50##
<b>Total</b>		<b>355</b>	<b>54</b>		<b>700</b>

\* Marks assigned on the basis of Seminar, Report, Submission, Presentation and Viva-voce.

\*\* 50% Marks assigned on the basis of submitted work (drawing sheets with exercises) & 50 based on exam

# G means grade assigned on the basis of attendance, conduct and report submitted by the students.

## Marks assigned on the basis of tests and viva-voce One Credit Hour is 1hr. 15 mins.

\$ For Practical/exercise, additional 18hrs

#### Theory Syllabus - Semester I

##### Mathematics I

Matrices, Differential Calculus, Differential Theorems, Integral Calculus and Differential Equations, Algebra, Polynomials, Business Mathematics.

##### Science (Chemistry and Physics)

Chemical Bonds, Thermodynamics, Electro Chemistry, Gas Laws, Viscosity, Velocity and Acceleration, Force, Laws of Motion, Energy.

##### Electrical Technology

Circuits, Generators, Motors, Transformers, Measuring Instruments, Distribution.

##### Applied Mechanics I

Scalars and Vectors, Centre of Gravity, Friction, Moment of Inertia, Stress-Strain Theory, Load Distribution, Bending Deflections, Torsion Analysis, Columns, Joints.

##### Mechanical Technology

Workshop Processes and their Appraisal, Hand Tools, Measuring Instruments.

##### Engineering Mechanisms

Kinematics, Mechanical Drives, Gear Trains, Clutches and Brakes, Bearings, Cams, Dynamometer.

##### Introduction to Principles of Packaging

Introduction, Components, Permeability, Mechanisms of Spoilage, Corrosion and Prevention of Corrosion, Package Evaluation, Ecological Aspects, Bar-coding Applications in Packaging.

##### Paper & Paper Board

Cellulosic Materials, Processes in Cellulose Industries, Paper and Board Manufacture, Testing of Cellulose and Paper Materials, Speciality Papers, Folding Cartons, Multiwall Paper Sacks, Composite Containers.

##### Glass Technology

Glass Containers: Manufacture, Properties, Applications and Testing.

##### Introduction to Plastics & Polymers

Polymeric Material, Properties, Applications, Polymer Composites, Polymer Blends, Additives for Plastics, Testing & Evaluation.

##### Engineering Drawing

Drawing exercises to be completed on drawing sheets for submission.

##### Practical's

Experiments based on Paper / Fibreboard and Glass Containers: Properties and Applications.

## Post Graduate Diploma in Packaging (PGDP)

### Teaching Scheme - Semester II

Sr. No.	Name of the Subject	Theory No. of Credits	Practicals	Examination Duration	Marks
1.	Economics	18	-	2 hrs	50
2.	Principles of management	18	-	2 hrs	50
3.	Mathematics II	18	-	2 hrs	50
4.	Applied Mechanics II	36	-	3 hrs	100
5.	Industrial Electronics	18	-	2 hrs	50
6.	Fluid Mechanics and Machinery	18	-	2 hrs	50
7.	Introduction to Plastic Processing	36	-	3 hrs	100
8.	Rigid packaging Material (Non-Plastic – CFB, Composites, Metal, Wood etc)	36	-	3 hrs	100
9.	Ancillary and other packaging material	18	-	2 hrs	50
10.	Package Printing Technology	18	-	2 hrs	50
11.	Machine Drawing	18\$	-	2 hrs	50**
12.	Industrial / Field Visit	180	-	-	G#
13.	Project Work	-	-	-	50##
14.	Practical's (Packaging Technology)	54	54	2 hrs	50^
<b>Total</b>		<b>486</b>	<b>54</b>		<b>800</b>

\$ For practical exercises, additional 18 hrs.

# G means grade assigned on the basis of attendance, conduct and report submitted by the students

\*\*50% Marks assigned on the basis of submitted work

\*\* Marks assigned on the basis of report submission, presentation and viva-voce.

^ Marks assigned on the basis of tests, journal and viva-voce One Credit Hour is 1 hrs. 15 min.

#### Theory Syllabus - Semester – II

##### Economics

Study of Demand and Supply, Market Structure, Nature of Production, Distribution, National Income and Money.

##### Principles of Management

Definition, objective, function etc.

##### Mathematics – II

Introduction to Statistics, Application of Statistics in Packaging, Normal Distribution, Dimensional Analysis, Measures of Central Tendency, Measures of Dispersion Coefficient of Variations, Skewness, Simple Correlations and Regressions, Multiple Regression, Multiple and Partial Correlation and Variability, Design aof Experiments for Packaging Applications, Statistical Quality control.

##### Applied Mechanics - II

Simple Stress-Strain Theory, Theory of Torsion, Columns and Struts.

##### Industrial Electronics

Electronic Devices: Tubes, Transistors, ICs, Rectifiers, Amplifiers, Oscillators, Analogue and Digital Measurements and Controls, Application of Computer in Packaging.

##### Fluid Mechanics and Machinery

Hydraulic and Pneumatic Machines, Rotary Pumps, Centrifugal Pumps, Constant and variable Delivery Pumps.

##### Introduction to Plastic Processing

Injection moulding, Extrusion & Blow moulding, Calendaring, Thermoforming, Rotational moulding, Foam Plastics, FRP Process, Coatings, Wax and lamination ProcessingTechnics.

##### Rigid Packaging Material (Non-Plastic - CFB, Composites, Metal, Wood etc.)

Fibreboard Containers, Drums, Tin, Aluminium Cans / Containers, Aluminium Foils, Steel Drums, Wooden Containers / Crates.

##### Ancillary and other Packaging Material

Cushioning, Textile Bags, Technics of sealing Process, Adhesive, Reinforcement, Twines and cards, Clips, Hooks, Stitching Methods, Seals & Closures.

##### Package Printing Technology

Process of Communication, Printing Processes and Methods, Layout & Paste-up, Composition for Printing, Theory of Full Colour Graphic Arts, Photography, Printing Image, Carriers, Printing Presses, Paper and other Printing Stocks, Printing Inks.

##### Machine Drawing

Submission of drawings based on exercises given.

##### Research Activities

Exposure to various research activities with laboratory assignments, analytical work as part of research projects by the Institute and also be entrusted with research projects after the completion of the Semester-II Examinations.

##### Practicals

Plastics Technology – Experiments connected with Plastics. Experiments on Seals, Coating, Laminates, Reinforcements.

## Post Graduate Diploma in Packaging (PGDP)

### Teaching Scheme - Semester III

Sr. No.	Name of the Subject	Theory No. of Credits	Practicals	Examination Duration	Marks
1.	Production Management	36	-	3 hrs	100
2.	Financial Management	27	-	2½ hrs	75
3.	Principles of Entrepreneurship	18	-	2 hrs	50
4.	Marketing Management	18	-	2 hrs	50
5.	Materials Management	18	-	2 hrs	50
6.	Product Packaging Food/Pharmaceuticals / Cosmetics/ Chemicals etc)	36	-	3 hrs	100
7.	Packaging Machinery	36	-	3 hrs	100
8.	Packaging Laws and Regulation	18	-	2 hrs	50
9.	Tooling and Design of Moulds for Packaging	36	-	3 hrs	100
10.	Introduction to Packaging Design Concepts	18	-	2 hrs	50
11.	Application of Computers in Packaging Design	18**	-	2 hrs	50
12.	Communication Skills	18	-	-	-
13.	Practical's (Packaging Technology)	54	54	2 hrs	50
<b>Total</b>		<b>351</b>	<b>54</b>		<b>825</b>

\*\*For practical exercises, additional 18 hrs One Credit Hour 1hr. 15 mins.

#### Theory Syllabus - Semester - III

##### Production Management

Industrial Engineering, Operations Research, Quality Control, Production, Planning and Control.

##### Financial Management

Cost Accounting and Financial Management.

##### Principles of Entrepreneurship

Definition, Objective, Function etc

##### Marketing Management

Structure, Models, Market Research, Demand curves, Market Share estimation, Sale Models, New Product Development, Distributions Strategy, Market Research.

##### Material Management

Concept & Objective for Material Function, Purchasing System, Inventory, Costing, Demand for Casting, transportation, Evaluation Material

##### Product Packaging (Food / Pharmaceuticals / Cosmetics / Chemicals etc.)

Introduction to Food Preservation / Packaging Technology, Method of Storage, Packaging of Food, Pharmaceuticals, Cosmetics, Chemicals and other products.

##### Packaging Machinery

Filling of Dry and Liquid Products, Filling of Carbonated Liquids and other Packaging Techniques, Cartoning, Labelling, Thermoforming.

##### Packaging Laws & Regulations

Standards and Standardisation, Quality Standard, Eco Regulations, FSSAI Rules and Regulations etc.

##### Tooling and Design of Moulds for Packaging

Injection Moulds, Blow Moulds, Extrusion Dies, Product Design, Designing for Packaging Application.

##### Introduction to Packaging Design Concepts

Introduction to design, 2D&3D dimensional Design, Study of Visual Elements, Principles of Typography, Introduction to visual ergonomics, understanding the relationship between consumer & communication Design.

##### Application of Computers in Packaging Design

Commands and systems variables, to co-ordinate a system, creating objects, editing methods, Layers and object properties, Creating 3D objects etc.

##### Auto CAD -

Practice Session

##### Communication Skills

Techniques and practices

##### Practicals (Packaging Technology)

Experiments connected with Metal Containers. Experiments connected with Permeability, Shelf-life Studies of Food, Cosmetics and Pharmaceutical Products



## Post Graduate Diploma in Packaging (PGDP) Teaching Scheme - Semester IV

Sr. No.	Name of the Subject	Duration	No. Credit Hrs	Marks
1.	Industrial Training & Report	5 months	480	500*
2.	Overall Performance		-	100**

\*To submit typed report as Project work based on training and viva-voce.

\*\*Marks will be assigned on the basis of regularity in attendance, conduct and progress.

### TOTAL CREDIT HOURS

1.	SEMESTER - I	355
2.	SEMESTER - II	486
3.	SEMESTER - III	351
4.	SEMESTER - IV	480

### CAMPUS PLACEMENTS

At the end of the Semester IV campus placement is arranged, wherein, students have the opportunity to face interviews arranged with a number of interested companies including from abroad. Campus placement interviews will be conducted at Mumbai & Kolkata centre.

Assistance in Placement will be provided by the Institute only to the Students who have 90% attendance in all the semesters in all the subjects. Student with less than 90% attendance will not be allowed to appear in the Campus Placement Procedure.



Placement Interview



Placement Interview

## Certified Packaging Engineer (CPE) Course

### Teaching Scheme - Semester I

Sr. No.	Name of the Subject	No. of Credit Hours	Exam Duration	Marks
1.	Packaging Technology - 1	20	2 hrs	50
2.	Packaging Technology - 2	20	2 hrs	50
3.	Packaging Technology - 3	20	2 hrs	50
4.	Packaging Technology - 4	20	2 hrs	50
5.	Practical's - I	20	2 hrs	50
		<b>100</b>		<b>250</b>
# 1 Credit Hour - 90 Minutes				

### Theory Syllabus - Semester - I

#### Packaging Technology - 1:

Status of Packaging Industry, India and International and Export Packaging, Principles, Functions, Concept and Modern Role of Packaging, Concept of Packaging, Design and Sustainable Package Design, Concept and Advanced Processing of Glass Packaging, Concept and Advancement in Metal.

#### Packaging Technology - 2:

Concept and Advanced Processing of Paper and Paperboard Packaging, Concept and Automation in Corrugated Fibre Board Boxes Packaging; Wooden based Packaging, Pallet and Palletization; Ancillary and other Packaging Material, Data Analysis of Packaging Industry.

#### Packaging Technology - 3:

Introduction to Plastic Processing and Packaging, Concept and Advanced Processing of Plastics and Polymer Packaging, Advances in Flexible Packaging Material, Mould Design and its Application in Packaging, Advances in Tooling & Design of Moulds for Packaging.

#### Packaging Technology - 4:

Basic Concept of Printing on Packaging, Advances in Printing on Packaging with special reference to the Digital Printing, Various Types of Packaging Machinery, Packaging Standards, Laws and Regulation, Role of BIS, FSSAI, MoFI and NABL, IATA, ILAC, IMDG, ASTM, IMDG with reference to the Packaging Industry.



Laboratory Session



Laboratory Session

## Certified Packaging Engineer (CPE) Course

### Teaching Scheme - Semester II

Sr. No.	Name of the Subject	No. of Credit Hours	Exam Duration	Marks
1.	Packaging Technology – 5	20	2 hrs	50
2.	Packaging Technology – 6	20	2 hrs	50
3.	Packaging Technology – 7	20	2 hrs	50
4.	Management Studies	20	2 hrs	50
5.	Practical's – I	20	2 hrs	50
		<b>100</b>		<b>250</b>
# 1 Credit Hour – 90 Minutes				

### Theory Syllabus - Semester – II

#### Packaging Technology – 5: Basic

Concept and Advancement in Food Packaging, Basic Concept and Advancement in Automobile Packaging, Basic Concept and Advancement in Pharmaceutical Packaging, Basic Concept and Advancement in Cosmetics, Basic Concept and Advancement in Industrial Packaging.

#### Packaging Technology – 6:

Regulation related to Hazardous Packaging, Sustainable Packaging, Active and Interactive / Intelligent Packaging, MAP, CAP Concept of Packaging, Biodegradable and Biocompatible Packaging.

#### Packaging Technology – 7:

Application of Computers in Packaging Design & CAD Application, Automation and End Line Solution in Packaging industry, Interaction Between Machinery & Automation, Packaging 4.0, Role of Master Batch in Plastic Processing and Packaging Application of Robotics in Packaging, No Touch and Antiviral / Antimicrobial Packaging, Nano Packaging System.

#### Management Studies:

Production Management with reference to the Packaging, Marketing Management with reference to the Packaging Industry, Materials Management with reference to the Logistics.



Hostel



Campus



## Certified Packaging Engineer (CPE) Course

### Teaching Scheme - Semester III

Sr. No.	Name of the Subject	No. of Credit Hours	Exam Duration	Marks
1.	Industrial Training & Report	-	-	100*
2.	Dissertation, Presentation & Viva – Voce	-	-	100**
				<b>200</b>
# 1 Credit Hour – 90 Minutes				

\$ It may vary depending upon the company where the candidate will do the Industrial Training.

\* Marks will be assigned based on the regularity in Attendance, Conduct and Progress

\*\* Based on the typed report submitted on the Industrial Training, Dissertation, Presentation & Viva - Voce.

#### Important Dates:

Admissions Open: 01<sup>st</sup> April, 2023

Closing Date: 31<sup>st</sup> May, 2023

Commencement of the Course: 01<sup>st</sup> July, 2023

#### Academic Calendar:

##### One Year (Three Semesters) online programme

Sr. No.	SEMESTER	SEMESTER	DURATION
1.	SEMESTER - I	July 2023- October 2023	4 months
2.	SEMESTER - II	November 2023 - February 2024	4 months
3.	SEMESTER - III	March 2024 – June 2024	4 months

The online classes will be conducted in the Evening and / or Weekends to make it convenient for both working and Job seekers in the field of packaging.

**Note:** The fees for the Semester II & III has to be paid prior to the commencement of the Semesters. Appropriate late fee of Rs. 100/- per week will be charged. Candidates will be allowed to attend in the next Semester on payment of fees. All fees are to be paid as per details provided in this Prospectus-2022.



Girls Hostel





**Class Room Session**



**Pre-placement Talk**



**Group Discussion**





**भारतीय पैकेजिंग संस्थान**  
**Indian Institute of Packaging**

An autonomous body under the Ministry of Commerce & Industry, Govt. of India

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